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Ref: EPR-N

MAY 0 2 2007

Ms. Elaine Raper
Miles City Field Manager
Bureau of Land Management, Miles City Field Office
P.O. Box 219
Miles City, Montana 59301

Re: Draft Supplement to the Montana Statewide Oil and Gas Environmental Impact Statement and Amendment of the Powder River and Billings Resource Management Plans, CEQ # 2007002

Dear Ms. Raper,

The U.S. Environmental Protection Agency Region 8 (EPA) has reviewed the Bureau of Land Management's (BLM) Draft Supplement to the Montana Statewide Oil and Gas Environmental Impact Statement and Amendment of the Powder River and Billings Resource Management Plans. While EPA participated as a cooperating agency in the development of the Draft Supplemental Environmental Impact Statement (SEIS), EPA's review and comments are provided in accordance with our responsibilities under Section 102(2)(C) of the National Environmental Policy Act (NEPA), 42 U.S.C. Section 4332(2)(C) and Section 309 of the Clean Air Act, 42 U.S.C. Section 7609.

The Draft Supplemental Environmental Impact Statement (Draft SEIS) considers and analyzes the impacts associated with oil and gas activity, including exploration, production, development, and reclamation of up to 18,225 coal bed natural gas (CBNG) wells in the Powder River and Billings Resource Management Planning (RMP) areas. The Powder River and Billings RMP areas encompass the southeastern and south-central portion of Montana and include over 1.5 million acres of federally managed surface and over 5 million acres of federal mineral estate. The Crow Indian Reservation and the Northern Cheyenne Indian Reservation are located in between and are virtually surrounded by the RMP areas. The Northern Cheyenne Indian Reservation is a non-mandatory Class I airshed under the Clean Air Act.

The Draft Supplemental Environmental Impact Statement is a reissue of the original Montana Statewide Oil and Gas EIS and Amendment (2003 EIS/Amendment) and provides additional information and analyses pursuant to a United States District Court decision remanding the 2003 EIS/Amendment to BLM for supplemental NEPA analysis. In addition to

the five alternatives previously analyzed in the 2003 EIS/Amendment, the Draft SEIS includes three new development alternatives for managing oil and gas resources in the Billings and Powder River planning areas. From the three new alternatives, BLM has selected Alternative H – Multiple Screens as the new Preferred Alternative. Under Alternative H, the BLM estimates that over the next 23 years, up to 18,225 coal bed natural gas wells (CBNG) would be drilled in the Montana portion of the Powder River Basin, of which approximately 47 percent involve Federal minerals managed by BLM.

EPA Region 8's comments on water quality are briefly highlighted in this letter. EPA's comments on air quality will be provided as described under "Next Steps" at the end of this letter. The enclosed "Detailed Comments" include more discussion of our concerns regarding water quality as well as our comments on monitoring and groundwater.

Water Quality

BLM's preferred alternative proposes to implement a "water screen" to help monitor, mitigate and manage CBNG water. BLM would implement the "water screen" in close coordination with the Montana Department of Environmental Quality (Montana DEQ). If proposed untreated discharges within a watershed are projected to exceed 10 percent of the 7Q10 flow in the receiving stream, the BLM, in coordination with the Montana DEQ, would prepare a surface water monitoring report. If the results of this analysis indicated CBNG discharges have the potential to cause exceedances of surface water quality standards, BLM would work with the Montana DEQ to develop appropriate mitigation measures to prevent exceedances. Under the "water screen", "if CBNG discharges are causing surface water quality standards, or land health standards, to be exceeded, even if discharges do not exceed the 10 percent of 7Q10 threshold, no additional CBNG discharges would be allowed from federal wells upstream of the exceedances."

BLM has addressed many of the water quality issues raised by EPA in response to the original 2002 Draft EIS/Amendment. EPA's remaining concern is to ensure the preferred alternative has the appropriate measures in place to address potential excursions of water quality standards from CBNG discharge. EPA recommends the "water screen" clearly state that any CBNG discharges with the potential to cause or contribute to water quality standards excursions be allowed only in instances where imposition of water quality based effluent limitations are as stringent as necessary to meet applicable water quality standards (i.e. rather than only prohibiting any new wells upstream of exceedances.) Under EPA's regulations, a National Pollutant Discharge Elimination System (NPDES) permit cannot be issued if the imposition of conditions cannot ensure compliance with the applicable water quality requirements of all affected States (40 C.F.R. Sections 122.4(a) and (d)). Alternatively, NPDES permits may be issued where water quality-based requirements are as stringent as necessary to meet water quality standards (Clean Water Act Section 301(b)(1)(C), 40 C.F.R. Sections 122.44(d)(1)(i), 122.4(a) and (d)). Pollutants of concern for CBNG-discharged water may include sodium adsorption ratio (SAR), electrical conductivity (EC) and total dissolved solids (TDS).

BLM predicts that water quality will be "slightly altered, however, beneficial uses will not be diminished" due to the proposed CBNG development (page 4-77). EPA is concerned about potential alternations in water quality since monitoring data shows that water quality standards (WQS) are currently exceeded at times in some surface waters (Table 3-7, page 3-37, Table 4-54, page 4-113), and water bodies in the area are listed as water quality impaired under Section 303(d) of the Clean Water Act (Table 3-9, page 3-39). Where existing water quality is already at or near the WQS, even small reductions in water quality may cause or contribute to water quality impairments. EPA recommends the SEIS clearly state that discharges with the potential to cause or contribute to water quality standards excursions are allowed only where subject to water quality-based effluent limitations as stringent as necessary to meet standards.

Next Steps

EPA is currently providing our comments on the Draft SEIS document with the exception of the air quality impacts analysis. On April 30, 2007, BLM sent EPA a letter providing EPA with a 30-day extension to submit our comments on the Draft SEIS air quality analysis. By June 1, 2007, EPA intends to provide our assessment of the air impacts and analysis and the Agency's rating of the overall Draft SEIS document.

During the upcoming 30 days, EPA and BLM will discuss pursuing an approach similar to BLM's approach for the Jonah Infill Drilling Project Draft EIS, whereby BLM publicly noticed a supplemental air analysis and provided an appropriate timeframe for public comment on the supplemental information. If BLM decides to pursue a similar approach with regard to the air analysis for this Draft SEIS, EPA will comment on the supplemental air quality analysis and rate the entire Draft SEIS during the additional comment period provided. Otherwise, as stated above, EPA will conclude our comments by June 1, 2007.

If you have any questions regarding our comments, please contact me at 303-312-6004 or Joyel Dhieux, EPA's Lead NEPA Reviewer for this project, at 303-312-6647.

Sincerely,

Larry Svoboda
Director, NEPA Program
Ecosystems Protection and Remediation

Enclosure

Detailed Comments from the U.S. Environmental Protection Agency on the Montana Draft Supplemental Environmental Impact Statement and Proposed Amendment of the Powder River and Billings Resource Management Plans

Background and Alternatives Analysis

The Draft Supplemental Environmental Impact Statement (Draft SEIS) considers and analyzes the impacts associated with oil and gas activity, including exploration, production, development, and reclamation of up to 18,225 coal bed natural gas (CBNG) wells in the Powder River and Billings Resource Management Planning (RMP) areas. The Powder River and Billings RMP areas encompass the southeastern and south-central portion of Montana and include over 1.5 million acres of federally managed surface and over 5 million acres of federal mineral estate. The Crow Indian Reservation and the Class I Northern Cheyenne Indian Reservation are located in between and are virtually surrounded by the RMP areas.

The Draft Supplemental Environmental Impact Statement (Draft SEIS) is a reissue of the original Montana Statewide Oil and Gas EIS and Amendment (2003 EIS/Amendment) and provides additional information and analyses pursuant to a United States District Court decision remanding the 2003 EIS/Amendment to BLM for supplemental NEPA analysis. In addition to the five alternatives previously analyzed in the 2003 EIS/Amendment, BLM analyzed three new development alternatives in the Draft SEIS, including both a high range (Alternative F) and a low range (Alternative G) of phased development. Under Alternative F – Phased Development Multiple Screens (High Range), BLM would limit the number of federal applications for permit to drill (APD) approved each year cumulatively (both Federal and State APDs combined) to five percent (910 wells) for a total of 18,225 wells over a 23 year period. BLM would also limit its approval of APDs each year within each fourth order watershed and limit the amount of disturbance of crucial wildlife habitat on BLM-administered surface or private surface overlying federal minerals. Under Alternative G – Phased Development Multiple Screens (Low Range), development of CBNG on federal leases would be done following the same management actions as described in Alternative F; however, development would be limited to the low range of reasonably foreseeable development (6,470) and include an annual cumulative limit of five percent or 325 wells.

The third new alternative analyzed in the Draft SEIS, Alternative H – Multiple Screens, is BLM's new Preferred Alternative. Alternative H is similar to Alternative F in that it estimates development of 18,225 wells over the course of 23 years. However, the cumulative number of wells approved by BLM each year would not be limited by the number of CBNG permits approved by the State. Under Alternative H, CBNG proposals would be reviewed against four screens to determine if the proposal needs to be modified. Under the water screen, if proposed untreated discharge within a watershed is predicted to exceed 10 percent of the 7Q10, the BLM would coordinate with the Montana DEQ to prepare a surface water monitoring report. If the results of this report indicate CBNG discharges have the potential to cause exceedances of surface water quality standards, the BLM would coordinate with the Montana DEQ to develop appropriate mitigation measures. The wildlife screen would limit surface disturbance in crucial

habitat areas to 20% over the next 20 years. The Native American concerns screen would require additional site-specific groundwater and air analyses for development within 5 miles of the Northern Cheyenne and Crow Indian Reservations. Finally, the air quality impact screen would ensure development does not exceed federal or state air quality standards.

At this time, EPA Region 8 is providing comments on water quality, monitoring and groundwater. Per BLM's letter to EPA dated April 30, 2007, BLM is providing EPA with a 30-day extension to submit our comments on the Draft SEIS air quality analysis. By June 1, 2007, EPA intends to provide our assessment of the air impacts and analysis and the Agency's rating of the overall Draft SEIS document.

During the upcoming 30 days, EPA and BLM will discuss pursuing an approach similar to BLM's approach for the Jonah Infill Drilling Project Draft EIS, whereby BLM publicly noticed a supplemental air analysis and provided an appropriate timeframe for public comment on the supplemental information. If BLM decides to pursue a similar approach with regard to the air analysis for this Draft SEIS, EPA will comment on the supplemental air quality analysis and rate the entire Draft SEIS during the additional comment period provided. Otherwise, as stated above, EPA will conclude our comments by June 1, 2007.

Hydrological Resources – Alternative H: Water Screen and Mitigation

Under the Preferred Alternative, Alternative H, BLM would review all CBNG proposals against a water screen to determine if the proposal needs to be modified. With the water screen, if proposed untreated discharges within a watershed are projected to exceed 10 percent of the 7Q10 flow in a receiving stream, the BLM would coordinate with the Montana Department of Environmental Quality (Montana DEQ) to prepare a surface water monitoring report and to develop appropriate mitigation measures to prevent exceedances. In addition, if CBNG discharges are causing surface water quality standards or land health standards to be exceeded, even if discharges do not exceed the ten percent of 7Q10 threshold, no additional CBNG discharges would be allowed from federal wells upstream of the exceedances.

The monitoring and mitigation measures included in the proposed water screen along with the preparation of a Water Management Plan (page 2-24) help address our concerns about potential Water Quality Standard (WQS) excursions caused by CBNG discharges. However, EPA recommends the water screen clearly state that the Clean Water Act and EPA's implementing regulations require that discharges with the potential to cause or contribute to WQS excursions be subject to water quality-based effluent limitations as stringent as necessary to meet water quality standards. Under EPA's regulations, a National Pollutant Discharge Elimination System (NPDES) permit cannot be issued if the imposition of conditions cannot ensure compliance with the applicable water quality requirement of all affected States (40 C.F.R. Section 122.4(a) and (d)). Alternatively, NPDES permits may be issued where water quality-based requirements are as stringent as necessary to meet water quality standards (Clean Water Act Section 301(b)(1)(C), 40 C.F.R. Sections 122.44(d)(1)(i), 122.4(a) and(d)). Pollutants of concern for CBNG-discharged water may include sodium adsorption ration (SAR), electrical

conductivity (EC) and total dissolved solids (TDS).

EPA is also concerned that applications for individual well permits will not require preparation and submittal of a Plan of Development, which includes a water management plan. Information provided in the Draft SEIS indicates that CBNG wells produce water at a rate of 15-20 gallons per minute (gpm) which over time is reduced to 2-5 gpm (page 3-52). With the substantial quantities of water produced by even an individual CBNG well, EPA recommends BLM require water management plans for individual CBNG APDs.

Hydrological Resources – Surface Water Quality

In the Draft SEIS, the impacts to surface water quality were estimated using EC and SAR values for CBNG produced water quality based on data available through 2002. Considering the extensive CBNG development that has occurred since 2002, EPA recommends BLM review the CBNG water quality estimates used in the impact analysis to ensure they are still representative and not significantly under-predicting or over-predicting the impact to surface water quality.

In Chapter 3, the Draft SEIS describes the current hydrological conditions and acknowledges that there are existing exceedances of WQS. The text in the Draft appears to indicate persistent drought and associated low flows are responsible for the WQS exceedances. The Draft SEIS also appears to conclude that CBNG development does not have measurable effects on surface water quality, since current EC and SAR levels in surface waters are comparable to historical values at similar flows (page 3-41). EPA is concerned about concluding that CBNG development will not affect surface water quality because additional discharges of saline CBNG produced water will likely increase TDS loading to receiving streams. Also, increased stream flows from CBNG discharges beyond historical flows have potential to destabilize stream channels and increase channel and bank erosion, and thus, potentially increasing sediment and siltation impairments. EPA recommends BLM clarify this text in Chapter 3.

Under the Preferred Alternative, drilling is expected to occur in a more discrete, more rapid manner rather than the drilling being drawn out within each watershed. In the Draft SEIS, BLM reviewed each watershed and predicted there would be no additional untreated Montana CBNG surface discharge into the Tongue River; no untreated discharge of Montana CBNG water into Rosebud Creek; no treated or untreated water into the Little Powder or the Powder Rivers; and no untreated discharge in Mizpah Creek. The only anticipated untreated discharge into the Little Bighorn and Bighorn Rivers is on the Crow Reservation. Since EPA currently directly implements federal environmental laws and regulations in Indian country in Region 8, including on the Crow and Northern Cheyenne Indian Reservations, EPA would issue any applicable NPDES permits for water discharges. It is unclear from the discussion in Chapter 4 of the Draft SEIS whether the Yellowstone River would receive both untreated and/or treated discharges. However, BLM predicts that "Although some discernable surface water effects may be detected at the Sidney station, beneficial uses would not be reduced under the Preferred Alternative."

In summary, BLM predicts that water quality will be "slightly altered, however, beneficial uses will not be diminished" due to the proposed CBNG development (page 4-77). EPA is concerned about even "slight alterations" in water quality since monitoring data shows that WQS are currently exceeded at times in some surface waters (Table 3-7, page 3-37, Table 4-54, page 4-113), and water bodies in the area are listed as water quality impaired under Section 303(d) of the Clean Water Act (Table 3-9, page 3-39). Where existing water quality is already at or near the water quality standards (WQS), even small reductions in water quality may cause or contribute to water quality impairments. Under the Clean Water Act and EPA's implementing regulations, discharges with the potential to cause or contribute to water quality standard excursions are allowed only where subject to water quality-based effluent limitations as stringent as necessary to meet water quality standards.

We are concerned that up to 18,225 new CBNG wells could potentially be developed on Federal surface and mineral estate lands, including some with additional saline discharges to surface waters. Many additional new wells discharging saline water to surface waters may reasonably be anticipated to increase TDS loading to receiving waters, and thus, may have the potential to increase the frequency and extent of exceedances of WQS and severity of water quality impairments.

Hydrological Resources – Presentation of Potential Impacts

Throughout the development of the EIS and subsequent SEIS, numerous stakeholders have expressed concerns regarding CBNG water management and impacts. Thus, it is important the SEIS clearly identify the water bodies that may be impacted and the potential impacts. EPA recommends this section be expanded in the SEIS to include more detailed maps and to clarify impacts predicted under the Preferred Alternative, Alternative H.

In Chapter 4, BLM presents analysis of the potential impacts of its Preferred Alternative, Alternative H. The analysis indirectly describes the impacts by referring the reader to various other alternatives. For example, the Draft SEIS states that for Alternative H: "Impacts from impoundments would be similar to those described under Alternative A"; "Impacts on groundwater under this alternative would be the same as in Alternative B with the exception…"; and for the Tongue River, "Therefore surface water quality impacts will be similar to those listed under Alternative E". For Rosebud Creek, "impacts would be the same as Alternative F" which then directs the reader to Alternative D. In summary, "Impacts to surface water under this alternative will be essentially the same as under Alternative F." While these comparisons may be useful, they make it difficult to fully understand the impacts of BLM's Preferred Alternative. EPA recommends BLM clearly provide the full details of the predicted impacts of its Preferred Alternative in one location, rather than cross-reference numerous alternatives.

The Draft SEIS also lacks a comprehensive watershed map that clearly identifies and labels all the major waterbodies in the project area (e.g., Little Big Horn River, Bighorn River, Tongue River, Yellowstone River, Rosebud Creek, Hanging Woman Creek, Otter Creek, Pumpkin Creek, Stump Creek, Powder River, Little Powder River, Mizpah Creek, etc.,) and their

use classifications (B-2, B-3, C-3). EPA believes that a watershed map is important to allow the public and EIS reviewers to more clearly understand the locations of all major waterbodies in the project area, and thus, better evaluate the potential hydrologic and water quality impacts of proposed CBNG developments. In addition, EPA recommends Maps 3-7 and 3-10 be revised so the reader can easily identify Class I and Class IV waters; this is an important distinction. EPA also suggests Map 3-8 be revised to include streams.

EPA recommends Table 3-9 (page 3-39) "Impaired Water Bodies In Area Of Maximum CBNG Potential" be expanded to include all CWA Section 303(d) listed water bodies in the area that could potentially be affected by CBNG development (e.g., Otter Creek, Pumpkin Creek, Powder River, Little Powder River, Mizpah Creek, Stump Creek). Table 3-9 should be revised to disclose all water quality impaired streams in the project area that could potentially be affected by CBNG development.

Water Quality - Use Classifications and Designated Uses

It is important for the SEIS to disclose to the public and other reviewers that different uses must be protected in the different waterbodies in the Planning Area. Page 3-38 describes waters within the Powder River Basin study area and the beneficial uses generally assigned to Montana's waters, and page 3-39 describes how waters are classified very generally. The EIS should explain the connection between use classifications and designated uses and criteria and include the specific use classifications and associated designated uses of the waters in the Planning Area. For example, according to Montana's water quality standards (17.30.611), the Tongue River mainstem from the Wyoming border to Prairie Dog Creek is classified B-2 with the associated designated uses of drinking, culinary, and food processing, bathing, swimming, primary contact recreation (April 1-Oct. 31), secondary contact recreation (Nov. 1-March 31), growth and marginal propagation of salmonid fishes and associated aquatic life, waterfowl and furbearers, and agricultural and industrial water supply. From Prairie Dog Creek to the Yellowstone River, the Tongue River mainstem is classified B-3 with the same designated uses as B-2, but for non-salmonid fishes with a less stringent temperature standard. The Yellowstone River mainstem is also B-3. The Powder River, Little Powder River and all of the tributaries in the Yellowstone River drainage are C-3 (designated uses are the same as B-3 except marginal for drinking, culinary, and food processing). Referencing the designated uses will provide context for evaluating parameters that may impact all uses.

Water Quality - Monitoring

EPA also recommends that adequate resources be devoted to water quality monitoring in watersheds where there are CBNG wells that discharge to surface waters in order to assure that surface waters with potential WQS exceedances are identified, and adequate mitigation measures are included to avoid WQS exceedances. We recommend that sufficient monitoring be conducted in all receiving streams where there are CBNG discharges to surface waters to ensure

that such discharges are not causing or contributing to excursions of WQS, rather than only those watersheds where proposed untreated discharges exceed 10 percent of the 7Q10 flow.

EPA recommends requiring instream monitoring above and below CBNG discharges that have potential for causing WQS excursions. EPA is pleased to note BLM states in Chapter 4 that "no future untreated discharge of CBNG water would be allowed from federal wells unless the regional surface water monitoring stations above and below the proposed discharge are active." (Page 4-124).

Water Quality Standards

The Draft SEIS discusses the extent to which Montana's water quality standards would apply to Wyoming. In general, the Draft SEIS correctly notes that regulated discharges in Wyoming, as the upstream State, are required to ensure compliance with Montana's water quality standards at the border. However, in some instances the Draft SEIS language is not clear on this point. We suggest BLM review the current draft language to ensure the document clearly and consistently explains that regulated discharges in Wyoming must ensure compliance with Montana's water quality standards at the border.

We recommend the SEIS evaluate and discuss potential water quality impacts associated with parameters other than SAR and EC, such as selenium and fluoride. Montana's surface water aquatic life water quality criteria for selenium are 20 micrograms per liter (µg/l) (acute) and 5 µg/l (chronic) with a human health standard of 5 µg/l. For fluoride, Montana has a human health water quality criterion of 4,000 µg/l. We did not see information in the Draft SEIS regarding the potential levels of these pollutants in CBNG discharges or area water bodies, nor did we see any water quality impact assessment regarding impacts of CBNG discharges on selenium and fluoride levels or other potentially harmful pollutants in surface waters. EPA recommends the SEIS evaluate and discuss potential water quality impacts associated with other potential pollutants in CBNG discharges, especially selenium and flouride.

Groundwater

EPA also has concerns regarding aquifer drawdowns that could adversely impact ground water supplies and springs/seeps on the Northern Cheyenne and Crow Indian Reservations. The Draft SEIS states that drawdown from CBNG could cause wells and springs obtaining water from developed coal seams to have reduced yields (page 4-80), and that groundwater aquifer drawdown over large contiguous areas will occur (page 4-76, 77).

The Preferred Alternative includes a 5 mile buffer around the Northern Cheyenne and Crow Indian Reservations where groundwater modeling would be done to determine potential for CBNG impacts to tribal groundwater (page 4-127). Given that the five foot drawdown contour may likely extend 7 to 11 miles from pumped areas, and drawdown impacts could range as far as 22 miles from CBNG developments (page 4-80), it would appear that a buffer for groundwater

modeling greater than 5 miles may be appropriate around Reservation boundaries. If CBNG development occurs outside the 5 mile buffer area around Reservation boundaries, EPA is concerned that aquifer drawdown impacts may go undetected, and therefore, not be mitigated. Thus, EPA recommends groundwater modeling and monitoring be required for CBNG development within 11 miles of Reservation boundaries at a minimum. EPA believes the commitments in the water screen could be strengthened to provide a means for detecting all potential aquifer drawdown that may occur from CBNG developments, including those that result from CBNG developments that are over 5 miles from the Reservation boundaries.

The Draft SEIS indicates that production plans will be modified to limit drawdown impacts to springs that are culturally significant or critical to wildlife. If the springs have been identified, EPA recommends the SEIS include a map identifying the springs. If the springs have not been identified, EPA recommends the SEIS include a discussion of how the springs will be identified and monitored, and how mitigation measures will be considered to reduce impacts from drawdown.

Monitoring Appendix

With the proposed adaptive management approach with Alternative H, the effectiveness of mitigation will depend to a great extent on the ability to monitor and detect adverse impacts. We are pleased that a Monitoring Appendix has been included in Volume II of the Draft SEIS to provide information on the proposed monitoring program. We have some comments in regard to monitoring as follows:

a) We recommend that a monitoring element to assess visibility impairments, as wells as a remedial action trigger for addressing visibility impairments be included in the SEIS.

b) As noted above, we believe water quality monitoring should be conducted in receiving streams sufficient to determine whether CBNG discharges to surface waters have the potential to cause or contribute to WQS exccursions, and not just where untreated CBNG discharges are greater than 10 percent of the 7Q10 of the receiving stream.

c) EPA recommends that water quality monitoring should assess all pollution parameters with a potential to cause WQS exceedances (i.e., SAR, EC, TDS, sedimentation parameters, and perhaps biological parameters, and any other potential pollutants that may be present in CBNG discharges in harmful amounts such as selenium, fluoride, etc.).

d) Exceedance of Northern Cheyenne Tribal Water Quality Standards should be included among the factors for Remedial Action Triggers (Table Mon-1).

e) The Remedial Action Trigger for groundwater drawdown is a 20 feet decrease in static water level. It appears that this would allow for a significant groundwater drawdown before the remedial action of a water well mitigation agreement is offered to landowners. EPA recommends that a lower magnitude of groundwater drawdown (e.g., 5 feet) be

considered for a Remedial Action Trigger.

f) It is not clear why the Remedial Action Trigger of a 50% decrease in spring discharge is only determined in the first 3 years. If groundwater drawdowns that cause significant reduction in spring flows occur after 3 years, EPA recommends these adverse effects to springs should also be mitigated.

Adequate resources are often not devoted to monitoring of environmental effects so that effects may go undetected, and thus, are not adequately mitigated. EPA recommends that BLM discuss this issue in the SEIS and ensure adequate resources for monitoring. EPA also recommends that BLM should ensure that agencies and the public to have access to periodic monitoring reports, and information on mitigation taken in response to monitoring results.

Hydrological Resources – Detailed Comments

Chapter 1, Page 1-6: For the benefit of the public, when discussing the regulatory areas where the BLM has shared responsibilities or consultation requirements with other federal agencies on page 1-6, EPA suggests the following edits to the second bullet:

> Activities that would impact waters of the U.S. from the discharge of produced water—BLM must comply with the Clean Water Act (CWA) as provided by Section 313 (which subjects the federal government to the same requirements regarding the control and abatement of water pollution as any nongovernmental entity relating to the discharge or runoff of pollutants) and Section 401 of the CWA, (which gives states the authority to veto or place conditions on federally permitted activities that may result in water pollution)…

Chapter 1, Page 1-12: EPA also suggests the EIS include language to explain the linkage between water quality standards, permits, monitoring and assessment. EPA suggests adding the following text to the end of the CWA Section 303(c) paragraph on page 1-12: "NPDES permits must include limits as stringent as necessary to meet water quality standards (40 CFR 122.44). When waters are monitored and assessed, the data is compared to the water quality standards to determine whether the water is impaired and whether discharges have the reasonable potential to cause or contribute to such impairments."

Chapter 3, Page 3-32: EPA suggests adding a reference in the fourth paragraph of the Surface Water section to Vol. II, HYD-10 to -11 and adding language to HYD-10 to clarify that the standards language there is the 2003 language, not the 2006 language. EPA also suggests BLM add the following clarification to the end of the first paragraph on page 3-36: "The numerical standards for EC and SAR shown in Table 3-6 are the same under Montana's 2003 and 2006 standards."

Chapter 3, Page 3-32: For the benefit of the public, the EIS should include some basic information about water quality standards. EPA suggests adding the paragraphs on page 3-38 and

3-39 about the Clean Water Act and use classifications to the beginning of the Surface Water section on page 3-32 and adding the following information:

> Water quality standards define the water quality goals of a water body and include designated uses (e.g., swimming, fishing, aquatic life, etc.), narrative or numeric water quality criteria necessary to protect those uses, and antidegradation (Montana uses the term "nondegradation") provisions to prevent degradation of water quality except in certain circumstances. Under CWA Section 304(a), EPA periodically publishes recommendations (guidance) for use by states and tribes to set water quality criteria. Water quality criteria are levels of individual pollutants or characteristics or descriptions of conditions of a waterbody that, if met, protect the designated use of the water. EPA's regulations require states and tribes to adopt an antidegradation policy that protects existing in-stream uses, high quality waters (waters whose quality exceeds that necessary to protect the CWA Section 101(a)(2) "fishable/swimmable" goals), and allows for State designation of Outstanding National Resource Waters (40 CFR 131.12). Water quality for high quality waters may be lowered only after public involvement, and if:
>
> 1. Existing uses are protected;
> 2. The state finds that the lowering is necessary to accommodate important economic or social development in the area in which the waters are located; and
> 3. The highest statutory and regulatory requirements for point sources (e.g., Best Available Technology) and cost-effective and reasonable Best Management Practices (BMPs) for non-point sources are achieved.
>
> NPDES permits must include conditions necessary to comply with water quality standards (40 CFR 122.4(a) and (d)), including limits to control all pollutants that will cause, have the reasonable potential to cause, or contribute to an excursion above any water quality standard (40 CFR 122.44(d)(1)). Permits issued in one state for an interstate water must ensure compliance with the applicable water quality requirements of all affected states (40 CFR 122.44(d)).

Chapter 3, Page 3-32: EPA also suggests adding the following sentence to the end of the paragraph on page 3-32 about EC and SAR: "Although EPA has no recommended 304(a) criteria for SAR and EC, states may choose to adopt criteria for SAR and EC to protect agricultural crops."

Chapter 3, Page 3-36: The SAR and EC concentrations corresponding to the minimum mean monthly flows at each station were estimated from flow versus concentration relationships developed for each station based on USGS data through 2002. This cut-off date is appropriate for most rivers in the Powder River Basin, but may not be appropriate for the Tongue River and downstream of the Tongue River at Stateline station. CBM produced water has been directly

discharged to the Tongue River upstream of the Tongue River at Stateline station since 1997. The flow versus concentrations relationships for the Tongue River should be reviewed to ensure those used in the SWQATR for the impact analysis are appropriate for the time period prior to CBM discharge to the river.

Chapter 3, Page 3-52, Water Management: For clarification, EPA recommends the text under the third bullet be revised from "injection into deep non-underground sources of drinking water.." to "injection into deep underground non-drinking water sources."

Chapter 4, Page 4-78: Paragraph four should include the following clarification after the first sentence: "The numerical standards for EC and SAR are the same under Montana's 2003 and 2006 standards."

Chapter 4, Page 4-88. Table 4-37: Please clarify the EC values for the Bighorn River at Bighorn. The Table lists the EC values as 962, but the Surface Water Quality Analysis Technical Report (SWQATR) lists the values as 952.

Surface Water Quality Analysis Technical Report: The hydrologic resources sections refer repeatedly to the SWQATR, but do not provide a valid reference to the report. The Bibliography lists this report as written by Greystone Environmental Consultants, November 2002. However, the final report was published in January 2003 and lists both Greystone and ALL Consultants as the authors.